

## E-GOVERNANCE FOR EFFICIENT MANAGEMENT TO REDUCE CORRUPTION: AN ICT DRIVEN PARADIGM

T.Sheela, Sri Sairam Engineering College, Anna University, Chennai, India

[hod.it@sairam.edu.in](mailto:hod.it@sairam.edu.in)

Daniel Chandran, Faculty of Engineering and IT, University of Technology Sydney, Australia

[Daniel.Chandran@uts.edu.au](mailto:Daniel.Chandran@uts.edu.au)

### **Abstract:**

*E-governance is the civil, political and economic processes of government including service provision, using information and communication technology. Only 25% of e-governance is completely successful in India as on March 2014. (Source: InformationWeek). The trail of unaccounted money (black money) is running round the clock in recent times. To curtail the flow of black money, illegal property purchase and proper tax levitation, a new routine called THE MONEY CARD SYSTEM is proposed in this paper. Purchase of any product or service has to be done only through this card by swiping it using a AAA (Authentication, Authorization, Accounting) for fund transfer. The money transfer takes place through e-banking. The database of the bank containing the information of the user will be put on cloud. SaaS (Software as a Service) provided by cloud can be used to compute the total possible income and expenditure for a person. Transparency can be achieved by providing an application in the cloud like Gmail to interface the user to account his/her details of income and expenditure. But in a practical platform using card is difficult. Hence every individual is allowed to hold some amount of threshold money (which is 10 % of a person's income) in their hand. The money cannot be withdrawn more than once a week and details has to be furnished regarding the expenditure of the threshold money which will be accounted in their account.*

**Keywords:** E-Governance, Cloud Computing, Card System, Arthakranti, Hadoop Service

### **INTRODUCTION:**

Nearly all countries have integrated Information Technology into their national economic strategies to improve the quality of life of their people. E-government aims to provide better services to their citizens. OECD defines e-government as the use of information and communication technologies, and

particularly the Internet, as a tool to achieve better government. There is a significant increase in e-government operation throughout the world. Developing countries are still behind in providing e-government services. One of the services that can be offered to citizens is Government to Citizens (G2C) which could be of benefit to the citizens and the government, such as online tax filing, personal documents like passports, birth certificates, property development applications, etc.

E-governance is the civil, political and economic processes of government including service provision, using information and communication technology. Governments, in particular, in the developing countries are in the domain of cloud computing, planning new ways to interact, improve services, optimise processes and revitalise democracy by spending their resources on IT. The main target is to deliver more interactive services to citizens and businesses through e-governance. For this purpose, the cloud computing helps in significant cost savings, wherein computing hardware and software infrastructure and applications are remotely hosted. The paper describes how this newly emerged paradigm of cloud computing can be helpful for e-governance. The existing e-governance is server centric, cost effective in nature and finds it unable to address all categories of users from rural urban to metropolitan citizens. Hence e-governance facilities are confined within limited inhabitants of India and remain unsuccessful. In this paper, we propose a new effective framework of e-governance based on cloud computing concept. One of the important sources of income to government is through tax collection. The present available system is inefficient in monitoring a proper tax collection and it is also a tedious process for the tax payers to pay their taxes. Hence we provide new routine, *THE MONEY CARD SYSTEM* to curtail the flow of unauthorised money (black money) and proper tax levitation. The System proposed has the tax monitoring capability with greater ease and comfort.

### PROBLEM STATEMENT:

The current trend of e-governance, though it satisfies many problems, is not yet completely reliable and sustainable for increasing the efficiency, reducing the corruption and circulation of black money. The current basic problem is the system of tax collection. There is a need for an ideological as well as a structural change in the e-governance system. To govern in the context of government is to exercise the authority to control and direct the policies.

### OVERVIEW OF E-GOVERNANCE IN INDIA

The process of electronically filing income tax returns through the Internet is known as e-filing. It is mandatory for companies and firms requiring Section 44AB audit to submit income tax returns electronically. Clients requiring Section 44AB audit return without an e-filing receipt will not be accepted. The Income Tax Department is keen to encourage e-filing of IT returns by all taxpayers in view of the following benefits to taxpayers.

- Anywhere-Anytime Filing
- No long queues
- Quick Processing
- Accurate data in return

The new Income Tax (IT) return forms were first introduced for AY 2008-09 in March 2008. The Income Tax Department is presently preparing their internal software to enable e-return preparation and to accept the e-filed return. IT return form scan be download.

### E-filing process

The e-filing process is briefly described in Fig 1. Tax payers can use Online ITR Filing program or download STO – ITR Software. The **ITR Software of Saral Tax Office** makes the process simple. STO - ITR Software is linked with STO - Income Tax Software, Balance Sheet, etc to get the data directly from the clients. User can also directly make the entry and generate the Returns either on paper or in XML.

### Manual Filing

In case of manual filing, individuals have to audit their income and pay their taxes accordingly. The

forms like ITR1, ITR2, ITR3, ITR4, 5 are filled depending on the nature of work.

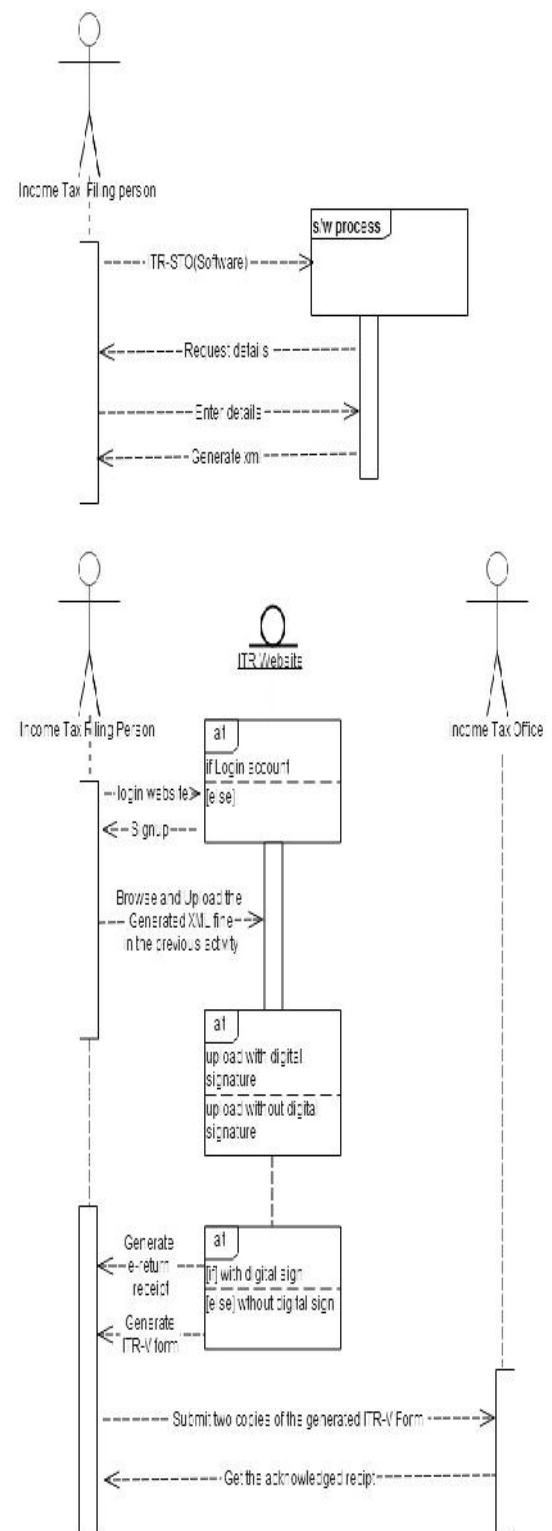


Fig.1. ITR filing process-UML diagram

### ***Components of the present E-governance system.***

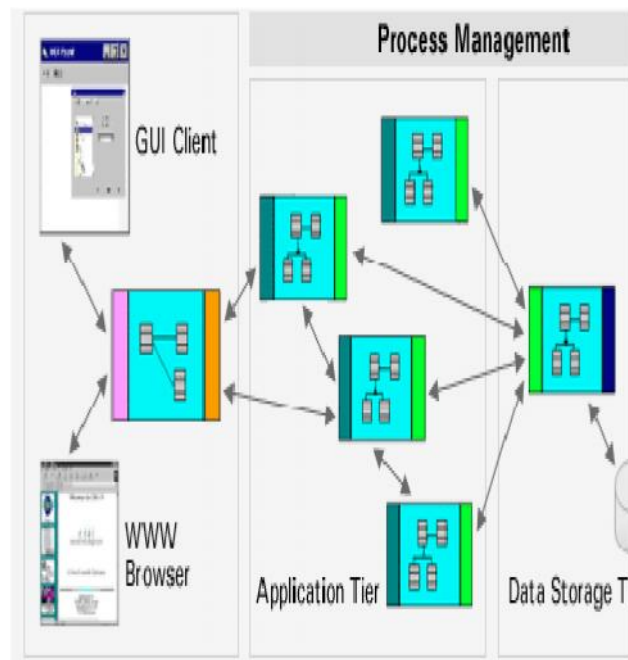


Fig. 2 Current E-governance system

### ***ARTHAKRANTI PROPOSAL***

Arthakranti proposal has come out of Pune based Arthakranti Sansthan, an Economic Advisory body constituted by a group of Chartered Accountants and Engineers. This idea has been patented by the Sansthan. The Proposal aims at solving all socio-economic issues. "The solution consists of some simple technical corrections to our systems of economic governance" (ArthaKranti). It aims to provide an effective and guaranteed solution to black money generation, price rise and inflation, corruption, fiscal deficit, unemployment, ransom, GDP and industrial growth, terrorism and good governance.

Arthakranti Proposal has 5 points of action:

- Withdrawal of existing taxation system completely, except customs import duties.
- Transaction tax for every transaction routed through a bank will attract certain deduction in appropriate percentage. i.e. a single point

tax deducted at source. All high value transaction has to be made through a banking system.

- Withdrawal of high denomination currency from circulation, e.g. 500 and 1000 rupee notes.
- Cash transactions will not attract any transaction tax
- Government to make legal provisions to restrict cash transactions up to a certain limit e.g. Rs.2000. (ArthaKranti).

#### ***Current status:***

1. The total banking transaction is more than 2.7 Trillion rupees per day which is, more than 800 Trillion rupees annually.
2. Less than 20% transaction is made through banking system and more than 80% transaction is made in cash which is not traceable.
3. 78% of Indian Population spend around 20-100 rupees daily. Use of 1000 rupee note is very minimal.

**Outcome 1:** If All taxes including income tax is removed:

- Salaried people will bring home more money which will increase purchasing power of the family.
- All commodities including petrol, diesel fast moving consumer goods (FMCG) will be cheaper by 35% to 52%.
- There is no tax evasion and there will not be any black money generation.
- Business sector will be boosted and self-employment will increase.

**Outcome 2:** When Banking Transaction Tax (BTT) is implemented:

- If BTT is implemented Government can generate more revenue. For example, if BTT is fixed as low as 0.7% to 1%, it could boost banking transaction many fold.
- No separate machinery like income tax department is needed and tax amount can be directly deposited in State/Central/District administration account.
- As transaction tax amount will be very less, public will prefer it instead of paying huge amount against direct/indirect taxes.
- There will be no tax evasion and Government will get huge revenue for development and employment generation.

- For special projects, Government can increase BTT for example, from 1% to 1.2%.

**Outcome 3:** If 1000 and 500 Rupee currency notes are withdrawn from circulation:

- (1) Corruption through cash could be stopped.
- (2) Black Money will either be converted to white or will vanish as Billions of 1000/500 unused currency will become null and void.
- (3) Unaccounted hidden cash that increases the prices of immovable properties and commodities will bring down the prices.
- (4) Terrorism supported by cash transaction will be stopped.
- (5) Will increase the income to government through stamp duty when the transaction for buying and selling properties is routed through the banking systems.
- (6) Circulation of counterfeit notes will be stopped as the printing for less value notes will not be profitable.

#### Effect of “Arthakranti Proposal” if implemented:

- Prices of all commodities will come down
- Salaried people will get more cash in hand
- There will be an increase in the purchasing power of the society
- Demand will be boosted which will increase production and more employment opportunity
- Surplus revenue to the Government for effective health/ education/ infrastructure/ security/ social works
- Lower Interest rates
- Product quality will improve
- Real estate prices will come down
- Increased funding for research and development

## RESEARCH SIGNIFICANCE AND FINDINGS

#### Drawbacks in Infrastructure:

The traditional infrastructure of e-governance acts as a greater hobble to implement the newly proposed work for tax management and black money curtailment. This is due to [1]

- Application Life Cycle management
- Software licensing and support
- Scalability
- Accountability
- Modifiability
- Physical security

#### Drawbacks in the method used:

The method which is currently followed suffers from a major drawback of accountability and low monitoring.

**Accountability:** The current system fails to check the responsibility of the citizens to pay taxes for every product and services they purchase.

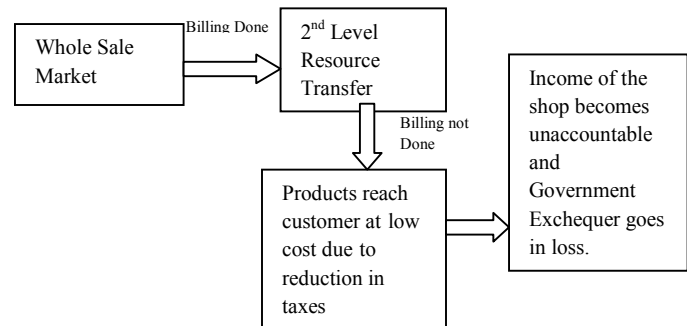


Fig. 3 Current System

**Low monitoring:** The present system does not track the expenditure of an individual. This results in illegal clubbing of money in few hands.

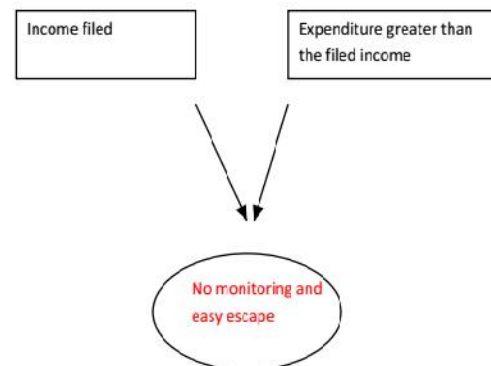


Fig. 4 Major drawbacks in the current system

## PROPOSED SYSTEM AND SUGGESTIONS FOR FUTURE RESEARCH:

#### Cloud as the base:

Cloud offers standard platforms in terms of providing different kinds of systems, middleware and Integration systems. Some of the standard platforms they provide are:

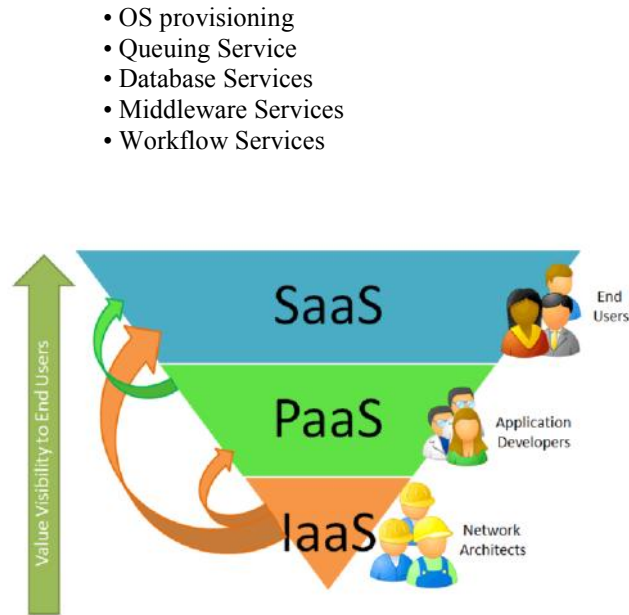


Fig. 5 Cloud services

Government departments requiring resources can get resources instantly as compared to traditional methods where they have to wait till they are purchased and deployed. Applications requiring middleware services can be provided instantly. Cloud offers applications as a service. For example, a district decided to move to E-governance solution for some application for their citizens need not purchase applications, hardware and software. They can make a request for a particular service from the cloud provider. Applications instances can then be created for their use. Numerous applications can be provided as standard services, where departments can request and manage E-governance applications. Cloud computing supported E-governance can provide efficient management and disaster recovery.

#### Money Card in Cloud:

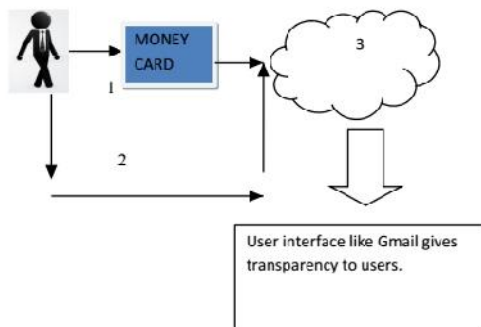


Fig. 6 Schematic representation of money card

1. Any income or purchase will have to be done only through a card based system. Individuals are not allowed to have cash more than 10 % of their income.
2. Since the card cannot be used at all times, cash is used but bills have to be obtained for the purchase will have to be updated in the individual's account.
3. All transactions are accounted in the software loaded in the cloud.
4. Functions of saas:
  - The software in the cloud plays a major role in maintaining individual's income and expenditure.
  - Software is designed based on the government's norms to calculate the taxes automatically, based on the income and expenditure.

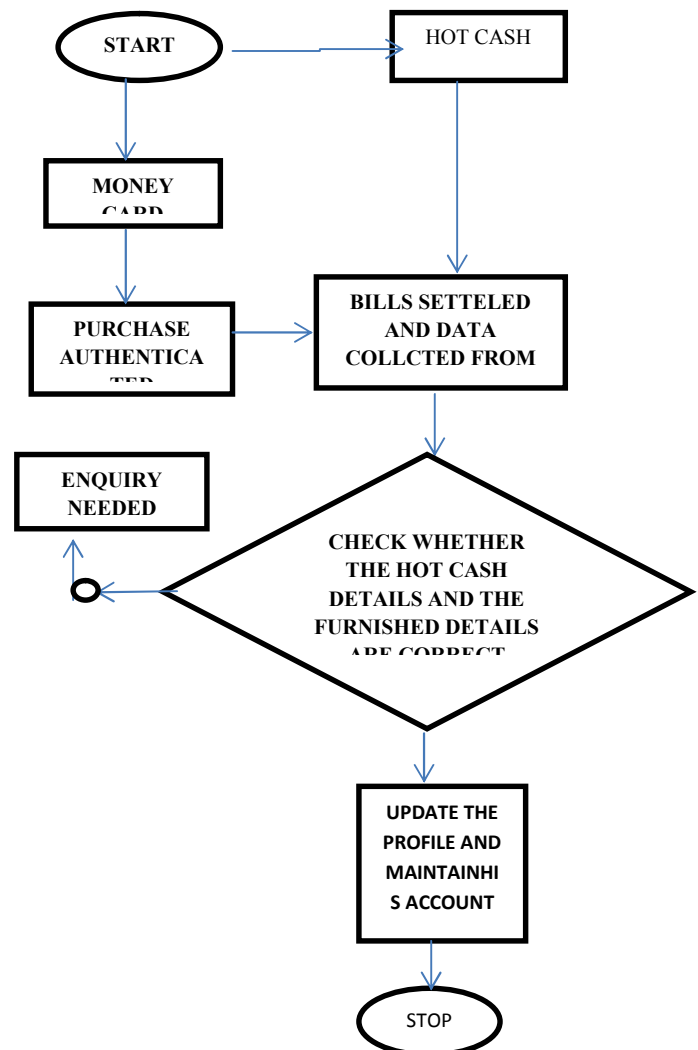


Fig. 7 Flow of proposed system



- For cash transactions bills need to be provided. This can be done through the interface provided or through e-filing.
- The software checks the cash against expenditure.
- The tax detected is automatically reverted to the governments exchequer

#### IMPLEMENTATION IN CLOUD COMPUTING:

Windows Azure uses a specialized operating system, called Windows Azure, to run its "fabric layer" — a cluster hosted at Microsoft's data centres that manages computing and storage resources of the computers and provisions the resources (or a subset of them) to applications running on top of Windows Azure. Windows Azure has been described as a "cloud layer" on top of a number of Windows Server systems, which use Windows Server 2008 and a customized version of Hyper-V<sup>[1]</sup> known as the *Windows Azure Hypervisor*<sup>[2]</sup> to provide virtualization of services.<sup>[1]</sup> The platform includes five services - Live Services, SQL Azure (formerly SQL Services), AppFabric (formerly .NET Services), SharePoint Services, and Dynamics CRM Services<sup>[3]</sup> - which the developers can use to build the applications that will run in the cloud. A client library, in managed code and associated tools are also provided for developing cloud applications in Visual Studio. Scaling and reliability are controlled by the Windows Azure Fabric Controller so the services and environment do not crash if one of the servers crashes within the Microsoft data centre and provides the management of the user's web application like memory resources and load balancing. Windows Azure can currently run .NET Framework applications compiled for the CLR, while supporting the ASP.NET application framework and associated deployment methods to deploy the applications onto the cloud platform. It can also support PHP websites. Two SDKs have been made available for interoperability with Windows Azure: The Java SDK for AppFabric and the Ruby SDK for AppFabric. These enable Java and Ruby developers to integrate with AppFabric Internet services. Access to Windows Azure libraries for .NET, Java, and Node.js is now available under Apache 2 open source license and hosted on GitHub. A new Windows Azure SDK for Node.js makes Windows Azure an excellent environment for Node applications and a limited preview of an Apache Hadoop-based service for Windows Azure enables Hadoop apps to be deployed in hours instead of days.

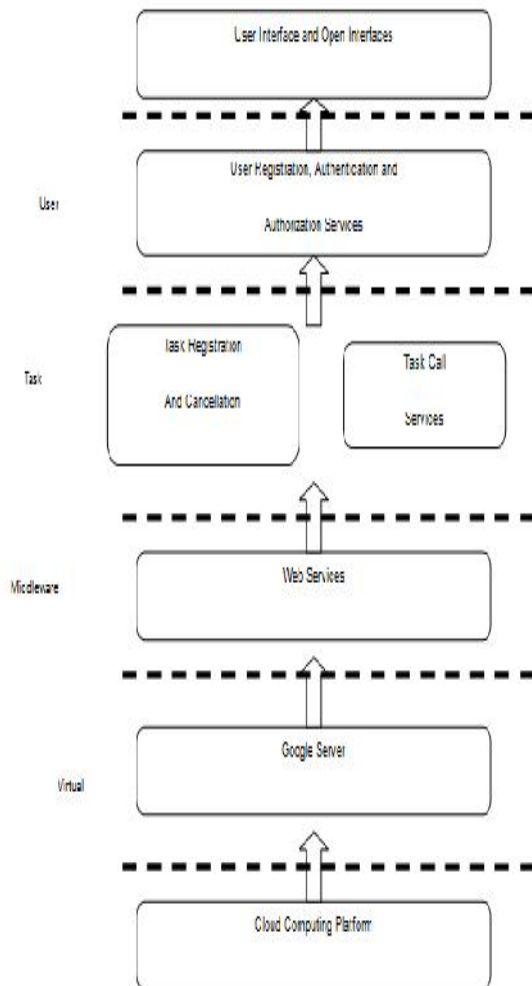


Figure 8 Implementation sample

#### ADVANTAGES:

This system provides an efficient way of monitoring the taxes and account details. It empowers a corruption free society. This method overcomes all the drawbacks of the present system and provides high fidelity.

- Simplified user interaction
- Provisioning enables policies to lower cost
- Increase system administrator productivity
- Improve service delivery to citizens
- Automate virtual infrastructure for peak performance
- Reduce costs

## **CONCLUSION:**

This study introduces a conceptual model for e-governance. The proposed *THE MONEY CARD SYSTEM* to curtail the flow of unaccounted money can be effected to a great extent. Cloud provides a solid foundation for the introduction of widespread provision of services to various stakeholders. Applications designed using the principles of Service Oriented Architecture deployed in cloud architecture will benefit the government in reducing operating costs and increasing the governance. SOA and cloud architectures when properly applied to developing E-governance applications have the capability to transform the nation into an Information Society.

Service Level Agreement will indicate to measure how well the services are being performed. Cloud helps to enable various e-government services faster and cheaper thereby accelerating the adoption and use of Information Technology for e-services. Cloud architectures allow rapid deployment of turnkey test environments with little or no customization. This work may provide a basis for future research in the associated areas.

## **REFERENCES:**

- [1]KeithWard. "More Azure Hypervisor Details" Virtualization Review. Retrieved 16 April 2009.
- [2]Alessandro Perilli. "Windows Azure uses a hypervisor but it's not Hyper-V". Virtualization Info. Retrieved 16 April 2009.
- [3]Cesar de la Torre (2 November 2008). "Windows Azure".Microsoft. Retrieved 18 November 2008.
- [4]ArthaKranti. [www.arthakranti.org](http://www.arthakranti.org).